06-16-2023 LETTING 098

INDEX OF SHEETS

COVER SHEET

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- GENERAL NOTES AND COMMITMENTS
- ALIGNMENT, TIES, AND BENCHMARKS
- SUMMARY OF QUANTITIES
- SCHEOULE OF QUANTITIES
- TYPICAL SECTIONS PLAN & PROFILE
- STRUCTURE PLANS

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED SUPERSTRUCTURE REPLACEMENT LOCAL BRIDGE FORMULA PROGRAM

STANDARDS (IN PROPOSAL)

000001-08 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

001001-02 AREAS OF REINFORCEMENT BARS 001006 DECIMAL OF AN INCH AND OF A FOOT

\$15001-04 NAME PLATE FOR BRIDGES 701901-08

TRAFFIC CONTROL DEVICES 725001-01 **OBJECT AND TERMINAL MARKERS**

BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

TR 209A (WINDSOR RD.) OVER KASKASKIA DITCH

CHAMPAIGN TOWNSHIP

SECTION 22-03122-00-BR

PROJECT KUKM(571) **CHAMPAIGN COUNTY**

C-95-004-24



FULL SIZE PLANS HAVE BEEN PREPARED USING STANGARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION 1-800-892-0123 OR 811

UTILITY COMPANIES:

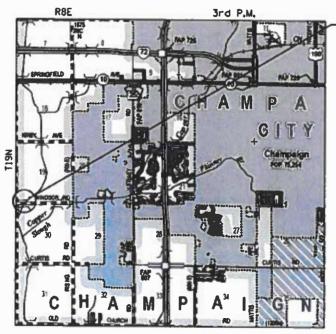
1000 COMMERCE DRIVE OAK BROOK, IL 60523 PHONE: (630)-573-6414 CONTACT: G05256@ATT.COM

AT&T DISTRIBUTION

MARATHON PIPE LINE LLC S39 SOUTH MAIN STREET FINDLAY, OH 45840 PHONE: (618)-SS4-0208 CONTACT: DEREK SHEETS

FRONTIER COMMUNICATIONS 109 E MARKET ST BLOOMINGTON, IL 61701 PHONE: (618)-554-0208 CONTACT: DEREK SHEETS

AMEREN ILLINOIS - (NORTH) 300 LIRERTY PEORIA, IL 61602 PHONE: (888)-659-4540 **CONTACT: CONSTRUCTION SERVICES**



LOCATION MAP

TOTAL LENGTH = 88.00 FEET (0.017 MI) NET LENGTH = 88.00 FEET

LICENSED PROFESSIONAL ENGINEER

SECTION 22-03122-00-6R BEGINS STA. 9+52.00 ENDS STA. 10 + 40.00

EX31. SN 810-4019

2~23-23

PROJECT MANAGER: MARK R. LEIGHTON, P.E., P.L.S.

CONTRACT NO. 91632



WORK CONSISTS OF THE REMOVAL OF EXISTING PRECAST CHANNEL BEAMS AND REPLACEMENT WITH PPC DECK BEAMS, SUBSTRUCTURE REHABILITATION, AND THE NECESSARY BACKFILL AND INCIDENTAL APPROACH WORK FOR S.N. 010-4019 AT STA. 9+96.00.

SECTION 22-03122-00-88 CHAMPAIGN 20 1 CONTRACT NO. 91632



FUNCTIONAL CLASSIFICATION - LOCAL ROAD CURRENT ADT = 350 DESIGN SPEED = 40 MPH **3R GUIDELINES**

APPROVED_	3/823
APPROVED	COUNTY ENGINEER 20
PAISED_	MAZLIT 22 20 23
Released For Bid Based on Limited Reviews_	DISTRICT FIVE ENGINEER DE LOCAL ROADS AND STREETS March 22 20 23
-	REGIDAL THIREE ENGINEER STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

- 1. EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.
- 2. ELEVATIONS USED THROUGHOUT THIS PLAN SET ARE REFLECTED FROM THE EXISTING BRIDGE PLANS FOR S.N. 010-4019.
- 3. ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF CONTRACT ITEMS INVOLVED
- 4. THE FOLLOWING APPLICATION RATES HAVE BEEN USED IN CALCULATING PLAN QUANTITIES: TEMPORARY EROSION CONTROL SEEDING: 100 LB/ACRE AGGREGATE BASE COURSE: 2.05 TONS/CU YD AGGREGATE SURFACE COURSE: 2.05 TONS/CU YD RIPRAP: 1.75 TONS/CU YD
- 5. THE CONTRACTOR'S OPERATIONS AND TEMPORARY STORAGE ACTIVITIES SHALL BE LIMITED TO THE WORK AREA AND/OR CONSTRUCTION LIMITS. ANY ADDITIONAL STAGING AREAS ADJACENT TO THE PROJECT AREA ARE SUBJECT TO PRIOR APPROVAL BY THE ENGINEER AND MUST NOT CONFLICT WITH EXISTING SIDE ROADS, INTERSECTIONS, DRIVEWAYS, OR DRAINAGE. ALL OPERATIONS SHALL BE SUBJECT TO REGULATORY REQUIREMENTS PERMITTED FOR THIS PROJECT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR COMPLIANCE WITH THE ABOVE REQUIREMENTS.
- 6. DISTURBED AREAS SHALL RECEIVE PERMANENT STABILIZATION WITHIN 7 DAYS OF COMPLETION OF CONSTRUCTION ACTIVITIES. TEMPORARY STABILIZATION OF WORK AREAS IS REQUIRED FOR ALL AREAS REMAINING UNDISTURBED FOR 14 DAYS, UNLESS WORK RESUMES PRIOR TO 21 DAYS. TEMPORARY STABILIZATION MUST BE APPROVED BY THE ENGINEER.
- 7. THE CONTRACTOR SHALL RELOCATE OR REMOVE AND REPLACE ALL SIGNS THAT INTERFERE WITH THE CONSTRUCTION OPERATIONS AND TEMPORARILY RESET ALL SUCH SIGNS DURING ALL STAGES OF CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE ENGINEER WILL DETERMINE THE PERMANENT LOCATION FOR EXISTING SIGNS TO BE RE-ERECTED.
- 8. CONTRACTOR SHALL FOLLOW CONSTRUCTION REQUIREMENTS OF SECTION 611 WHEN EXISTING FIELD TILE IS ENCOUNTERED. ALL FIELD TILES ENCOUNTERED SHALL BE CAREFULLY PRESERVED, REPAIRED AND CONNECTED TO THE PROPOSED DRAINAGE STRUCTURES, SEWERS OR DITCHES AS DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE VARIOUS DRAINAGE ITEMS OR AS DIRECTED BY THE ENGINEER.
- 9. THE LOCATIONS OF EXISTING WATER MAINS, GAS MAINS, SEWERS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE, BUT THEY ARE NOT GUARANTEED. UNLESS ELEVATIONS ARE SHOWN. ALL UTILITY LOCATIONS SHOWN ON THE CROSS SECTIONS ARE BASED ON THE APPROXIMATE DEPTH SUPPLIED BY THE UTILITY COMPANY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE UTILITY COMPANIES AND BY FIELD INSPECTION.
- $10. \ \ \mathsf{EMBANKMENTS} \ \ \mathsf{ON} \ \ \mathsf{HILLSIDES} \ \ \mathsf{OR} \ \ \mathsf{SLOPES} \ \ \mathsf{SHALL} \ \ \mathsf{BE} \ \ \mathsf{CONSTRUCTED} \ \ \mathsf{ACCORDING} \ \ \mathsf{TO} \ \ \mathsf{ARTICLE} \ \ \mathsf{205.03}.$
- 11. CONTRACTOR SHALL INSTALL ALL EROSION CONTROL MEASURES PRIOR TO STARTING ANY OTHER CONSTRUCTION WORK AT SITE.
- 12. CONTRACTOR SHALL VERIFY THE LENGTH OF REQUIRED PIPE CULVERTS AND PIPE DRAINS PRIOR TO ORDERING.

GENERAL NOTES

- 13. WHERE PERMANENT SURVEY MARKERS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE DISTURBED. THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER AND AN AUTHORIZED SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THE LOCATION.
- 14. THE CONTRACTOR SHALL USE CARE IN ALL REMOVAL ACTIVITIES NEAR ALL EXISTING ITEMS WHICH WILL REMAIN. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE
- 15. A UNIFORMLY STRAIGHT SAW CUT SHALL BE MADE AT LOCATIONS WHERE PROPOSED CONTROLLED LOW-STRENGTH MATERIAL LIMITS MEET THE EXISTING OIL & CHIP SURFACES. THE SAW CUT SHALL BE MADE FULL DEPTH THROUGH THE EXISTING SURFACE. THIS WORK WILL BE CONSIDERED INCLUDED IN THE COST OF THE CONTRACT ITEMS INVOLVED AND NO EXTRA COMPENSATION WILL BE ALLOWED.

COMMITMENTS

1. THERE ARE NO COMMITMENTS ON THIS PROJECT.

USER NAME = bjohnson	DESIGNED -	ВЛ	REVISED -
	DRAWN -	GSJ/BJJ	REVISED -
PLOT SCALE = 1200.0000 ' / ft.	CHECKED -	CWC	REVISED -
PLOT DATE = 2/23/2023	DATE -	2/23/2023	REVISED -

CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

Beginning chain TR209A description

Point CL001 N 1,244,488.980 E 979,476.846 Sta 3+98.21

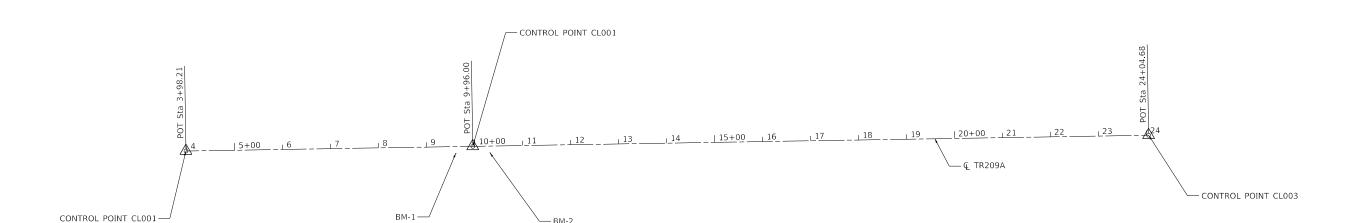
Course from CL001 to CL002 N 89° 03' 34.1" E Dist 597.795

Point CL002 N 1,244,498.792 E 980,074.560 Sta 9+96.00

Course from CL002 to CL003 N 89° 03' 34.1" E Dist 1,408.675

Point CL003 N 1,244,521.915 E 981,483.045 Sta 24+04.68

Ending chain TR209A description



BM 1 STA 9+60.38, 14.00' RT TOP OF CONCRETE WEST ABUTMENT WINGWALL ELEVATION = 97.13

BM 2 STA 10+31.62, 14.00' RT TOP OF CONCRETE EAST ABUTMENT WINGWALL ELEVATION = 97.13

	N A		
0	100	200	300
SCAL	E IN FEET		

ign firm 184001036	whks
engin	eers + planners + land surveyors

USER NAME = bjohnson	DESIGNED -	BJJ	REVISED -
	DRAWN -	GSJ/BJJ	REVISED -
PLOT SCALE = 2400.0000 ' / ft.	CHECKED -	CWC	REVISED -
PLOT DATE = 2/23/2023	DATE -	2/23/2023	REVISED -

CHAMPAIGN	COUNTY	HIGHWAY	DEPARTMENT

SCALE: 1" = 100'

	ALIGNMENT, TIES AND	BENCHMARKS	T.R. RTE	SECTION	COUNTY	TOTAL SHEETS	
TR	209A (WINDSOR RD.) OVER	KVČKVČKIV DITCH	209A	22-03122-00-BR	CHAMPAIGN	20	3
•••	ZUSA (WINDSUII IID.) OVEI	I KASKASKIA DITCII			CONTRACT	Г NO. 9	1632
100'	SHEET 1 OF 1 SHEETS	STA TO STA		TILLINOIS SED	AID DDOLECT		

FILE NAME: C:\SP\WHK

			+	BRIDGE
CODE			TOTAL	0013
NO.	ITEM	UNIT	QUANTITY	S.N. 010-4019
			Qormini	3.111 010 1013
0200100	EARTH EXCAVATION	CU YD	8	8
8100107	STONE RIPRAP, CLASS A4	SQ YD	83	83
8200200	FILTER FABRIC	SQ YD	83	83
5101400	AGGREGATE BASE COURSE, TYPE B	TON	18	18
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1	1
0102400	CONCRETE REMOVAL	CU YD	0.6	0.6
60200100	STRUCTURE EXCAVATION	CU YD	19.6	19.6
0300225	CONCRETE STRUCTURES	CU YD	4.6	4.6
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	1953	1953
0800205	REINFORCEMENT BARS, EPOXY COATED	POUND	650	650
0900205	STEEL RAILING, TYPE S1	FOOT	145	145
51500100	NAME PLATES	EACH	1	1
9300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	41.8	41.8
50100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	2	2

whks

DESIGNED - BJJ REVISED -DRAWN - GSJ/BJJ REVISED -PLOT SCALE = 1200:0.0000 ':" / ft. CHECKED - CWC REVISED -REVISED

CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

SUMMARY OF QUANTITIES TR 209A (WINDSOR RD.) OVER KASKASKIA DITCH SCALE: 1" = 50' SHEET 1 OF 2 SHEETS STA.

CONSTR. CODE

COUNTY TOTAL SHEET NO.

CHAMPAIGN 20 4

CONTRACT NO. T.R. RTE. 209A SECTION 22-03122-00-BR CONTRACT NO. 91632

CODE NO.	ІТЕМ	UNIT	TOTAL QUANTITY	BRIDGE 0013 S.N. 010-4019
0103600	PIPE DRAINS, CORRUGATED STEEL 15"	FOOT	20	20
0103700	PIPE DRAINS, CORRUGATED STEEL 18"	FOOT	20	20
7100100	MOBILIZATION	L SUM	1	1
2501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4
2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.25	0.25
6110073	EXISTING FIELD TILE REMOVAL	FOOT	40	40
7011800	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1	1

whks

REVISED DESIGNED - BJJ DRAWN REVISED GSJ/BJJ CHECKED -CWC REVISED -PLOT SCALE = 1200;0.0000 ':" / ft. PLOT DATE = 2/23/2023 DATE - 2/23/2023 REVISED -

SUMMARY OF QUANTITIES TR 209A (WINDSOR RD.) OVER KASKASKIA DITCH SCALE: 1" = 50' SHEET 2 OF 2 SHEETS STA.

CONSTR. CODE

T.R. RTE. 209A COUNTY TOTAL SHEET NO.

CHAMPAIGN 20 5 SECTION 22-03122-00-BR CONTRACT NO. 91632

CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

	20200100	FOR INFORMATION	FOR INFORMATION ONLY	
		EXCAVATION TO BE		EARTHWORK
LOCATION	EARTH	USED IN EMBANKMENT	EMBANKMENT	BALANCE
LOCATION	EXCAVATION	(ADJUSTED FOR SHRINKAGE)	(FILL)	WASTE(+) AND
		(EXC. x 0.75)		SHORTAGE (-)
	CU. YD.	CU. YD.	CU. YD.	CU. YD.
STA. 9+52.00 TO STA. 9+59.11	4	3	3	0
STA. 9+59.11 TO STA. 10+32.89		0		0
STA. 10+32.89 TO STA. 10+40.00	4	3	3	0
TOTAL	8	6	6	0

EARTH EXCAVATION SHRINKAGE FACTOR = 25%

35101400 AGGREGATE BASE COURSE, TYPE B

TR 209	9A (WINDS)	OR RD	.)			TON
CL	9+52.00	TO	CL	9+59.79		9
CL	10+32.2	ТО	CL	10+40.00		9
					TOTAL	18

60103700 PIPE DRAINS, CORRUGATED STEEL 18"

TR 209A (WINDSOR RD.)		FOOT
	TOTAL	20

X7011800 TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21

TR 209A (WINDSOR RD.)		L SUM
	TOTAL	1

67100100 MOBILIZATION

TR 209A (WINDSOR RD.)		L SUM
	TOTAL	1

60100060 CONCRETE HEADWALLS FOR PIPE DRAINS

TR 209A (WINDSOR RD.)		EACH
	TOTAL	2

X2501000 SEEDING, CLASS 2 (SPECIAL)

TR 209	9A (WINDS	OR RE).)				ACRE
LT	9+52.00	TO	LT	9+59.79			0.03
LT	10+32.2	TO	LT	10+40.00			0.03
RT	9+52.00	ТО	RT	9+59.79			0.03
RT	10+32.2	TO	RT	10+40.00			0.03
* TOTAL PER MIN. DEGREE OF ACCURACY TOTAL						0.25	

60103600 PIPE DRAINS, CORRUGATED STEEL 15"

TR 209A (WINDSOR RD.)		FOOT
	TOTAL	20

X6110073 EXISTING FIELD TILE REMOVAL

TR 209A (WINDSOR RD.)		FOOT
	TOTAL	40

design firm
no. 184001036 whks
engineers + planners + land surveyors

SER NAME = bjohnson	DESIGNED -	BJJ	REVISED -
	DRAWN -	GSJ/BJJ	REVISED -
LOT SCALE = 1200:0.0000 '." / ft.	CHECKED -	CWC	REVISED -
LOT DATE = 2/23/2023	DATE -	2/23/2023	REVISED -

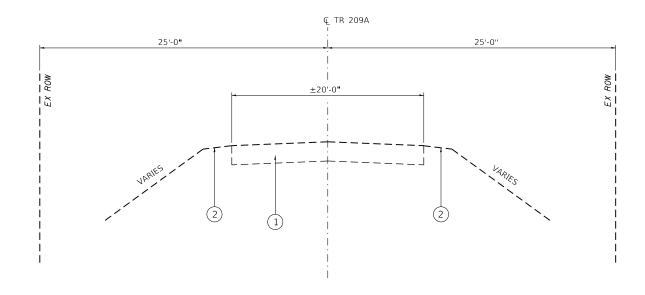
HAMPAIGN	COUNTY	HIGHWAY	DEPARTMENT

SCHEDULE OF QUANTITIES				T.R. SECTION		COUNTY	TOTAL SHEETS	SHEET NO.									
TR	2007	/\//II	งเทรก	R	RD.) OVE	B KVC	KVČKIV	DITCH		209A	:	22-0312	2-00-BR		CHAMPAIGN	20	6
- 111	ZUJA	(* * * * * * * * * * * * * * * * * * *	1030	'11	IID., UVL	II KAS	KASKIA	DITOII							CONTRACT	NO. 9	1632
= 50'	SHEET	1	OF	1	SHEETS	STA.		TO STA.					ILLINOIS	FED. A	ID PROJECT		

LEGEND

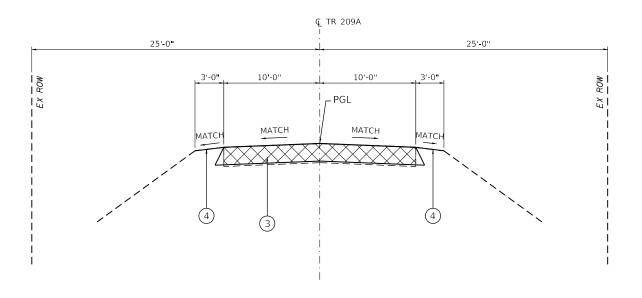
- 1) EX OIL AND CHIP
- 2 EX EARTH SHOULDER
- 3 PR AGGREGATE BASE COURSE, TYP B (8")
- 4 PR EARTH SHOULDERS





EXISTING TYPICAL SECTION

STA. 9+52.00 TO STA. 9+59.11
BRIDGE OMMISSION STA. 9+59.11 TO 10+32.89
STA. 10+32.89 TO STA. 10+40.00
(LOOKING EAST)



PROPOSED TYPICAL SECTION

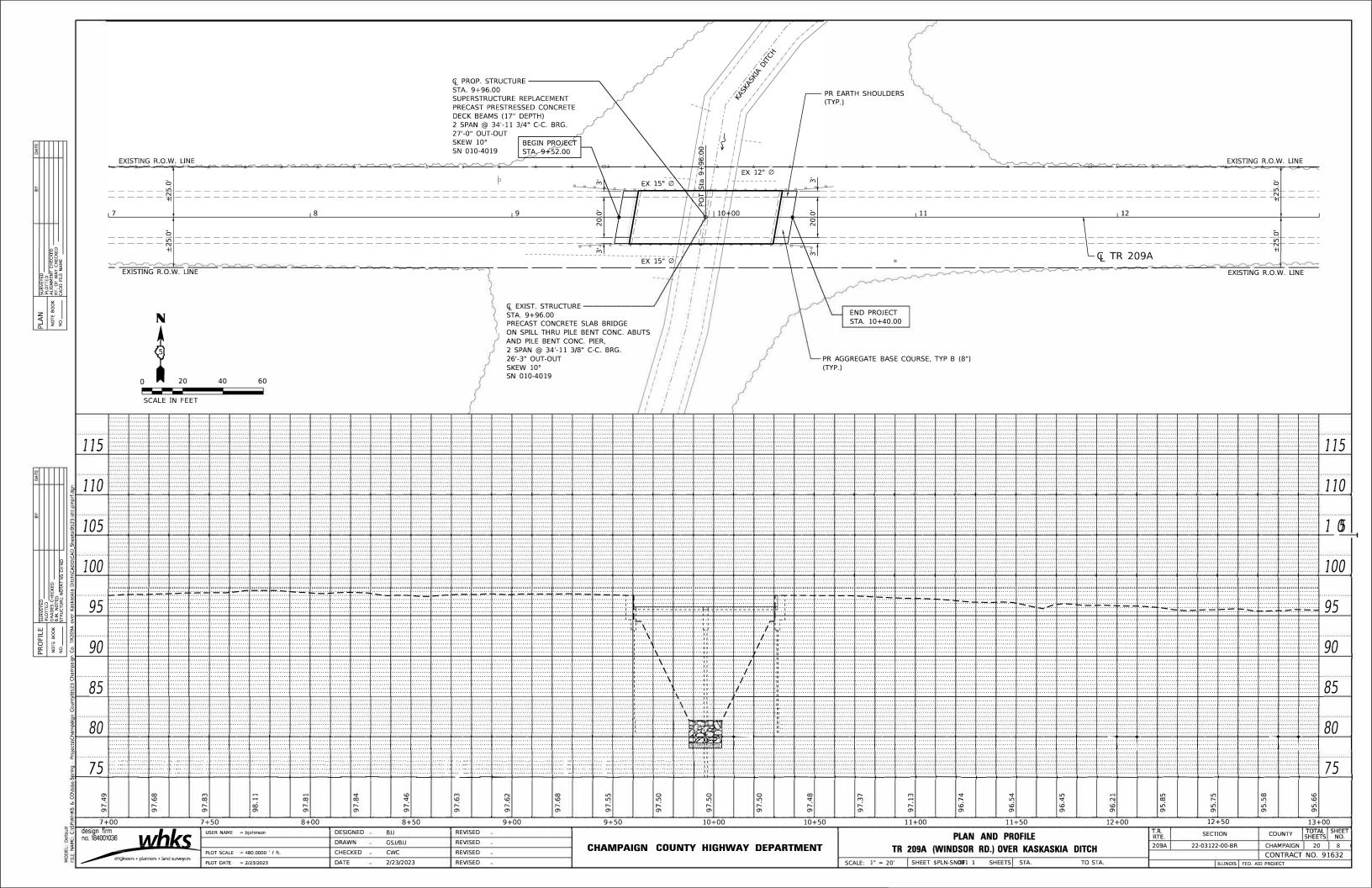
STA. 9+52.00 TO STA. 9+59.11 BRIDGE OMMISSION STA. 9+59.11 TO 10+32.89 STA. 10+32.89 TO STA. 10+40.00 (LOOKING EAST)

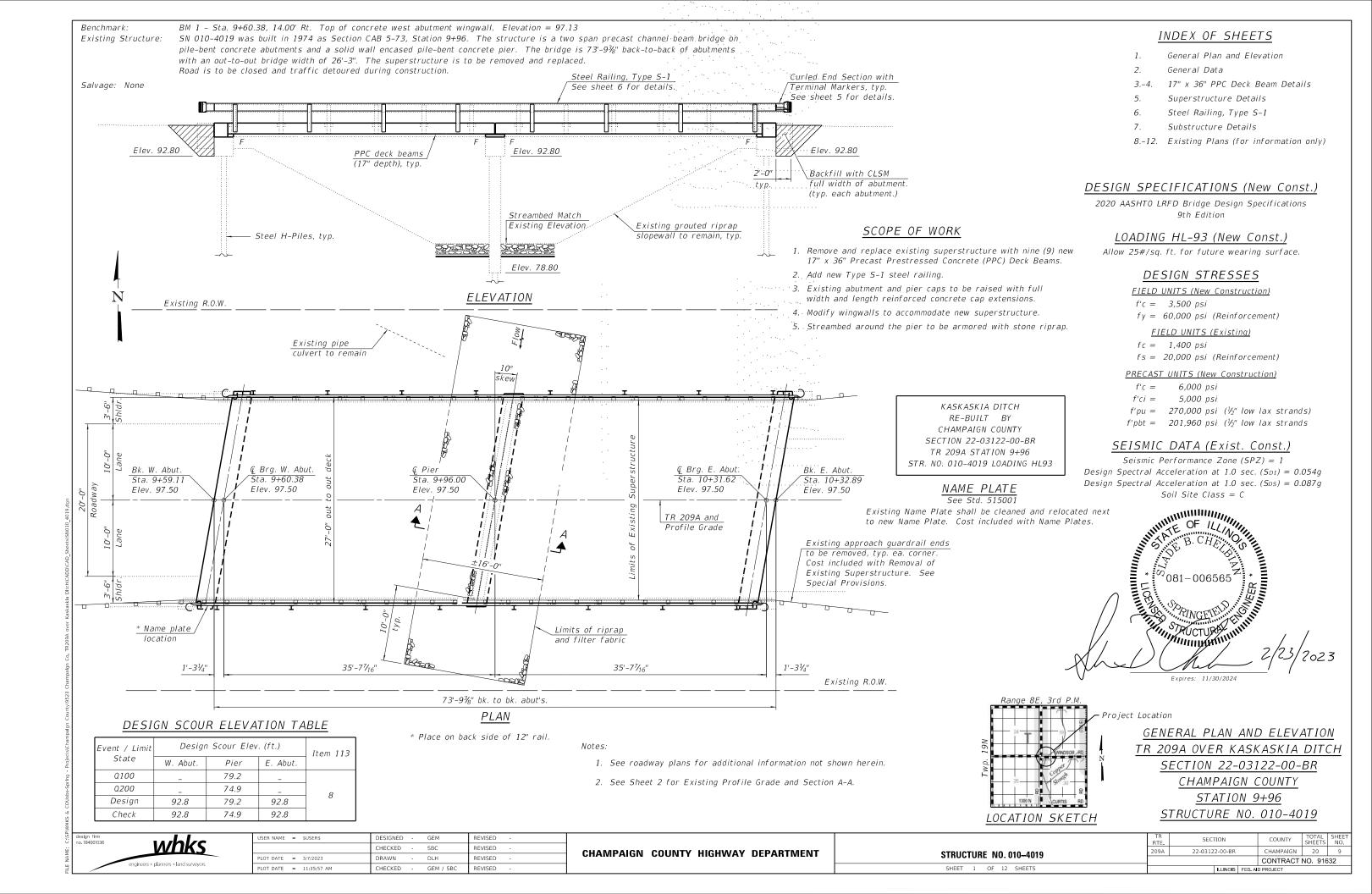
design firm no. 184001036	whks
engineers	+ planners + land surveyors

USER NAME = bjohnson	DESIGNED -	BJJ	REVISED -
	DRAWN -	GSJ/BJJ	REVISED -
PLOT SCALE = 120.0000 ' / ft.	CHECKED -	CWC	REVISED -
PLOT DATE = 2/23/2023	DATE -	2/23/2023	REVISED -

CHAMPAIGN	COUNTY	HIGHWAY	DEPARTMENT

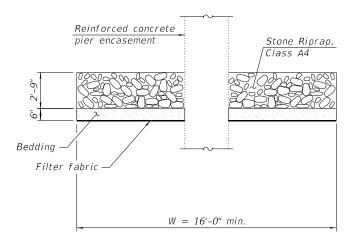
TYPICAL SECTION	ONS	T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	
TR 209A (WINDSOR RD.) OVER	KVČKVČKIV DITCH	209A	22-03122-00-BR	CHAMPAIGN	20	7
TH 203A (WHODON HD.) OVER RASKASKIA DITOR				CONTRACT	NO. 9	1632
SCALE: 1" = 10' SHEET 1 OF 1 SHEETS	STA. TO STA.		ILLINOIS F	ED. AID PROJECT		





GENERAL NOTES

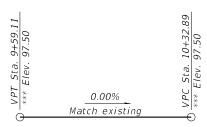
- 1. Reinforcement bars designated (E) shall be epoxy coated.
- 2. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- 3. Elevations shown herein have been taken from the existing plans and are subject to field verification and adjustment during construction.
- 4. Layout of the Pier Protection System may be varied in the field to suit ground conditions as directed by the Engineer. Minimum width of riprap shall be 16'-0". Thickness of riprap and bedding shall be as detailed herein.
- 5. The Contractor shall be responsible for diverting the water flow from the construction area using a method meeting the approval of the Engineer. This shall not be paid for separately but shall be included in the cost of the Contract.



<u>SECTION A-A</u> (Showing Pier Protection System)

TOTAL BILL OF MATERIAL

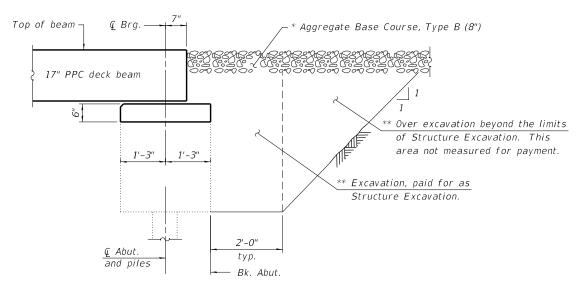
Item	Unit	Super	Sub	Total
Stone Riprap, Class A4	Sq. Yd.		83	83
Filter Fabric	Sq. Yd.		83	83
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		0.6	0.6
Structure Excavation	Cu. Yd.		19.6	19.6
Concrete Structures	Cu. Yd.		4.6	4.6
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	1,953		1,953
Reinforcement Bars, Epoxy Coated	Pound		650	650
Steel Railing, Type S1	Foot	145		145
Name Plates	Each	1		1
Controlled Low-Strength Material	Cu. Yd.		41.8	41.8
Terminal Marker – Direct Applied	Each	4		4



PROPOSED PROFILE GRADE

(Along © TR 209A)

*** Elevations were taken from existing plans and adjusted for a 2½" wearing surface thickness measured in the field by WHKS & Co. in March 2022. (See General Note 2)



SECTION AT ABUTMENT

(Dimensions are at Rt. L's)

- * See Roadway Plans
- *** Backfill with Controlled Low-Strength Material (CLSM) (Mix 2) full width of abutment cap only, typ. each abutment.

gn firm 84001036 whks engineers + planners + land surveyors
 USER NAME
 = dheberling
 DESIGNED
 - GEM
 REVISED

 CHECKED
 - SBC
 REVISED

 PLOT DATE
 = 2/23/2023
 DRAWN
 - DLH
 REVISED

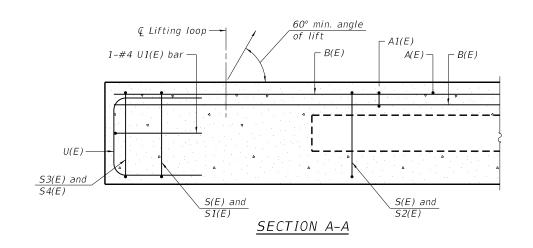
 PLOT DATE
 = 1:38:34 PM
 CHECKED
 - GEM / SBC
 REVISED

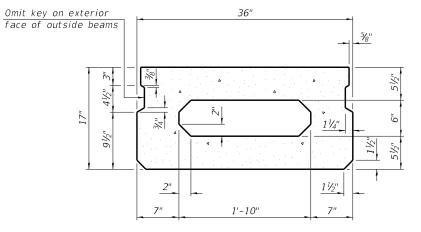
CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

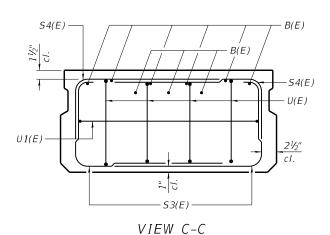
GENERAL DATA
STRUCTURE NO. 010-4019

SHEET 2 OF 12 SHEETS

TR SECTION COUNTY TOTAL SHEE NO. 09A 22-03122-00-BR CHAMPAIGN 20 10 CONTRACT NO. 91632





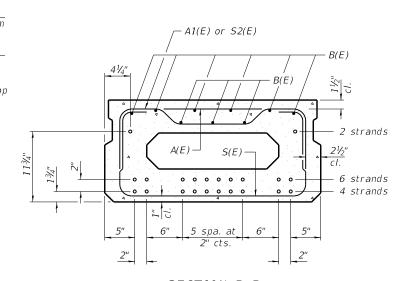


<u>SECTION B-B</u> (Showing dimensions)

_Symmetrical about Q 20-#4 S2(E) bars at 9" cts., top 1-#4 S2(E) bars at 9" cts., top 20-#4 S(E) bars at 9" cts., bottom 1-#4 S(E) bars at 9" cts., bottom 4-#4 S1(E) bars, top 4-#4 S(E) bars, bottom 10-#4 A1(E) bars at 1'-6" cts., bottom of top slab 1-#4 A1(E) bar at 1'-6" cts. bottom of top slab 41/5" 5-#4 A(E) bars at 3'-0" cts., top 3 spaces at — 1-#4 A(E) bar at 3'-0" cts., top r►B **▶**C 3 x 2-#3 B(E) bars full length, bottom of top slab 2-#4 S4(E) bars, top 2-#4 S3(E) bars, botton 0 x 2-#3 B(E) bars full length, top Fan 2-#4 S4(E) bars, top. Cut to fit - U1(E) \vdash_B Fan 2-#4 S3(E) bars, bottom. Cut to fit

PLAN VIEW

Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



SECTION B-B

(Showing reinforcement and permissible strand locations)

Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST

ONE BEAM ONLY

(For information only)

 $\frac{MINIMUM BAR LAP}{\#3 bar = 1'-6''}$

Bar	No.	Size	Length	Shape
A(E)	11	#4	2'-7"	
A1(E)	21	#4	2'-10"	~
B(E)	18	#3	18'-9"	
S(E)	49	#4	5'-9"	ட
S1(E)	8	#4	4'-3"	
S2(E)	41	#4	4'-6"	~
S3(E)	8	#4	3'-11"	
S4(E)	8	#4	3'-2"	
U(E)	8	#5	3'-8"	
U1(E)	2	#4	5'-5 ¹ / ₂ "	

Notes:

- 1. Bars indicated thus 3 x 2-#4 etc. indicate 3 lines of bars with 2 lengths per line.
- 2. See sheet 4 for additional details and Bill of Material.

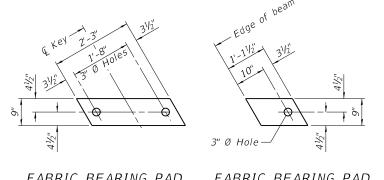
n firm 4001036	whks
	engineers + planners + land surveyors

36'-2" end to end beam

USER NAME = dheberling	DESIGNED	-	GEM	REVISED -	
	CHECKED	-	SBC	REVISED -	
PLOT DATE = 2/23/2023	DRAWN	-	DLH	REVISED -	
PLOT DATE = 1:38:35 PM	CHECKED	-	GEM / SBC	REVISED -	

CHAMPAIGN	COUNTY	HIGHWAY	DEPARTMENT

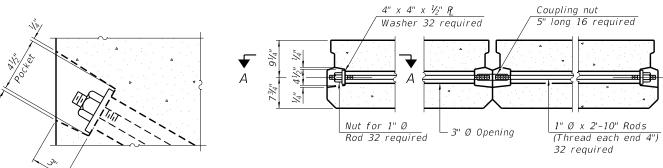
17" x 36" PPC DECK BEAM		SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STRUCTURE NO. 010-4019	209A	22-03122-00-BR	CHAMPAIGN	20	11
STRUCTURE NO. 010-4013			CONTRACT	NO. 916	32
SHEET 3 OF 12 SHEETS		ILLINOIS FED. AI	D PROJECT		



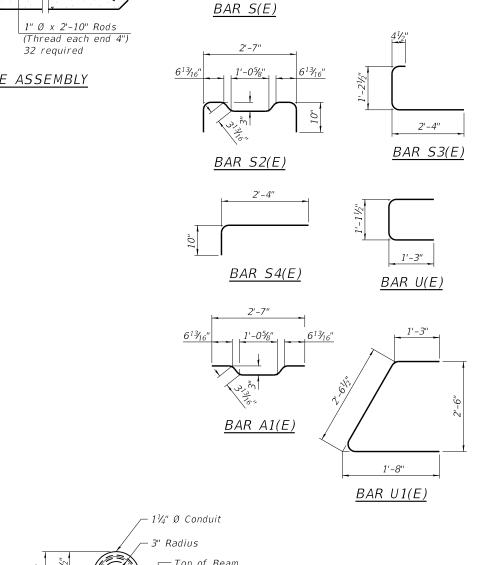
FABRIC BEARING PAD (Interior)

FABRIC BEARING PAD (Exterior)

All bearing pads shall be 1" thick.

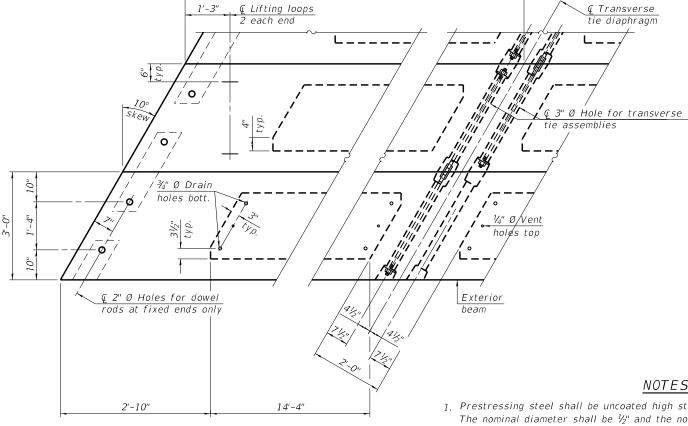


TYPICAL TRANSVERSE TIE ASSEMBLY



2'-7"

BAR S1(E)



18'-1"

PLAN VIEW

Connect beams in pairs with the transverse tie configuration shown.

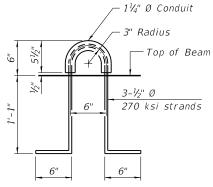
- 1. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in.
- 2. The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly
- 3. Two $\frac{1}{8}$ " fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- 4. A minimum $2\frac{1}{2}$ " Ø lifting pin shall be used to engage the lifting loops during handling.

NOTES

- 5. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- 6. Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

SECTION A-A

7. Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.



LIFTING LOOP DETAIL

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" depth) Sq. Ft. 1,953

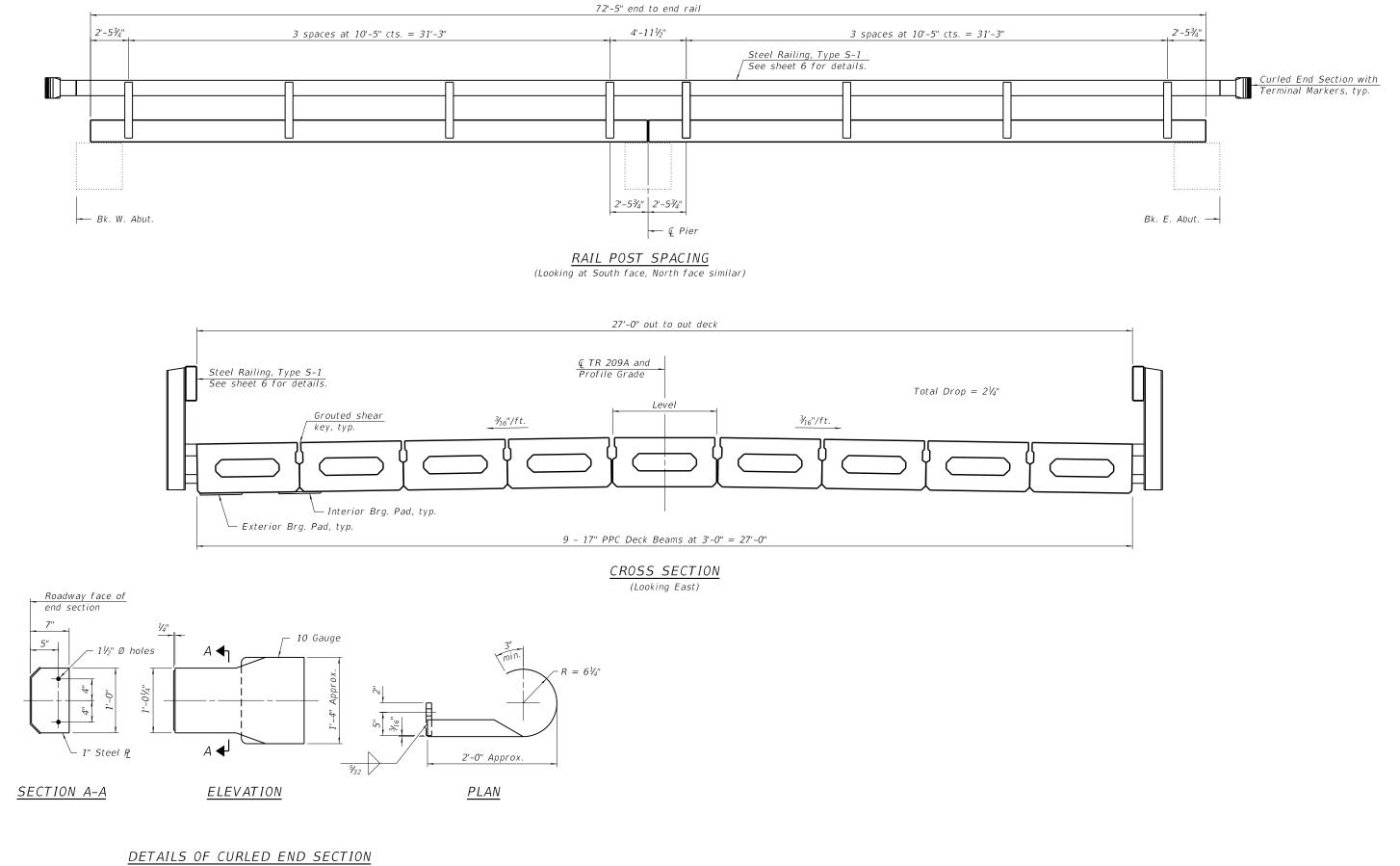
whks

USER NAME	=	dheberling	DESIGNED	-	GEM	REVISED	-	
			CHECKED	-	SBC	REVISED		
PLOT DATE	-	2/23/2023	DRAWN	-	DLH	REVISED		
PLOT DATE	-	1:38:35 PM	CHECKED	-	GEM / SBC	REVISED	-	

CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

17" x					EAM)10–40	DETAILS
	SHEE	T 4	OF	12	SHEETS	5

R E.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
9A	22-03122-00-BR		CHAMPAIGN	20	12
			CONTRACT	NO. 916	32
	II I INOIC	EED M	D DDO IECT		



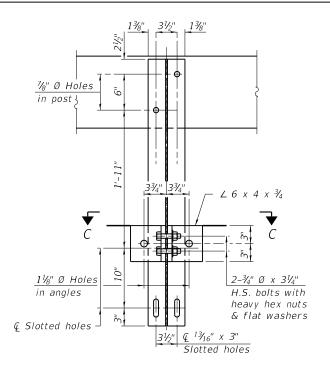
(Cost included with Steel Railing, Type S-1.)

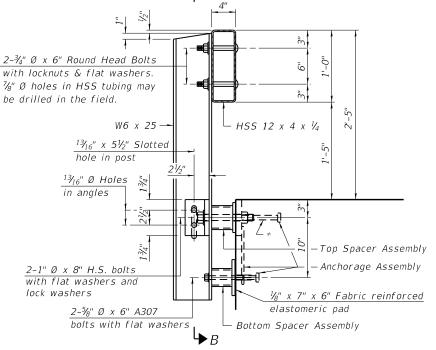
design firm no.184001036	whks
	engineers + planners + land surveyors

USER NAME = dheberling	DESIGNED - GEM	REVISED -
	CHECKED - SBC	REVISED -
PLOT DATE = 2/23/2023	DRAWN - DLH	REVISED -
PLOT DATE = 1:38:35 PM	CHECKED - GEM / SBC	REVISED -

CHAMPAIGN	COUNTY	HIGHWAY	DEPARTMENT

SUPERSTRUCTURE DETAILS STRUCTURE NO.010–4019		SECTION		COUNTY	TOTAL SHEETS	SHEET NO.	
		22-03122-00-BR			CHAMPAIGN	20	13
					CONTRACT	NO. 916	32
SHEET 5 OF 12 SHEETS			ILLINOIS	FED. A	D PROJECT		



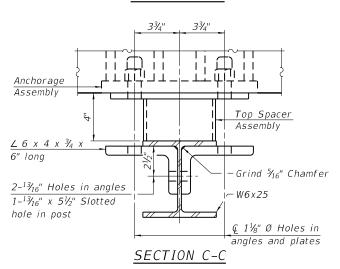


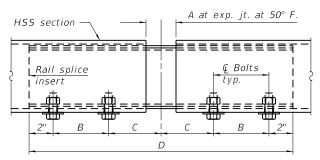
 $\mathbf{F}B$

$1\frac{1}{8}$ " Ø Holes for 1" Ø x 4" Round head bolts. Provide 2 flat washers & locknuts for guard rail connection shown on the curled end section connection on sheet 5. ¾" Ø Drain Hole

- 1. A sufficient number of shims of various thicknesses, sized to fit behind the top spacer assembly, 5" x 1^{11} /2", and bottom spacer assembly, 6" x 7", shall be provided to adjust posts for proper alignment. If the summation of shims is greater than 1/4" (top) or $\frac{1}{2}$ " (bottom), longer bolts are required. Cost included with Steel Railing, Type T-1.
- 2. All steel rail elements including shims shall be galvanized according to Article 509.05 of the Standard Specifications.
- 3. All HSS tubing shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.
- 4. Rail splice inserts may be built out of $2-\frac{3}{8}$ " bent plates in lieu of the 4 plate rail splice inserts shown, provided the outside dimensions
- 5. All round head bolts shall be ASTM A307 with locknuts according to ASTM A563 grade A.

SECTION B-B

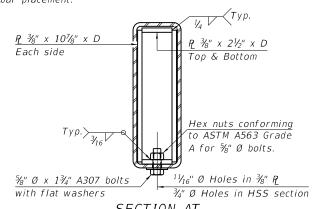




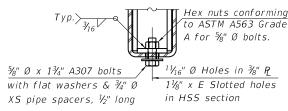
RAIL SPLICE ELEVATION

SECTION AT RAILING POST

* The outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchorage assembly. The anchorage studs may be bent down $\frac{1}{2}$ " to accommodate the top reinforcement



SECTION AT RAIL SPLICE



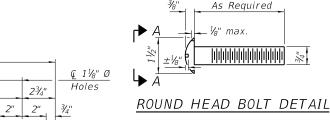
RAIL SPLICE CONNECTION AT EXPANSION JT.

SPLICE DIMENSIONS

RAILING CRITERIA				
NCHRP 350 Test Level	2			
Railing Weight (plf)	50			

<u>-</u>				-		
Location	T	А	В	С	D	Ε
All locs. not over exp. jts.	0	1/4"	4"	4"	1'-8"	-
Over Strip Seal Jt.	≤4"	21/2"	45/8"	4¾"	1'-10"	3½16"
Over Finger or Modular Jt.	≤9½"	5½"	73/8"	71/4"	2'-91/4"	5 ¹³ / ₁₆ "
Over Finger or Modular Jt.	≤15"	8½"	10½"	10"	3'-81/4"	8% ₁₆ "

T =; total movement along centerline of roadway at expansion joint.



END OF RAIL DETAILS

71/5"

31/2"

VIEW D-D

61/2"

 $\bullet \bigcirc \bullet$

 $\frac{1}{2}$ " \times $1\frac{1}{2}$ " \times 6"

ANCHORAGE ASSEMBLY ** Threaded areas shall be plugged or blocked off during casting of concrete.



1" Ø bolts.

each nut

Without Slot or Recess



With Slot (shown) or Approved Recess

 $\frac{3}{4}$ " Ø x 6" Granular or solid

flux filled headed studs

1006.32 of the Std. Specs.

automatically end welded. 4

conforming to Article

**3" long hex coupling nuts conforming to ASTM A563

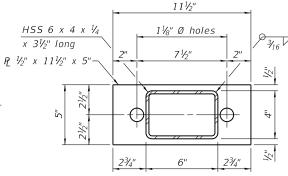
Required per P

<u>Gr</u>ade A for ¾" Ø bolts.

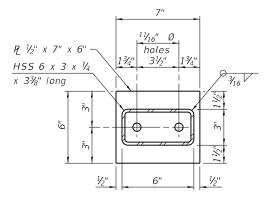
VIEW A-A

**Heavy hex nuts conforming to ASTM A563 Grade DH for

Cast 1" voids behind



TOP SPACER ASSEMBLY



BOTTOM SPACER ASSEMBLY

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	145



USER NAME = dheberling	DESIGNED -	GEM	REVISED -
	CHECKED -	SBC	REVISED -
PLOT DATE = 2/23/2023	DRAWN -	DLH	REVISED -
PLOT DATE = 1:38:36 PM	CHECKED -	GEM / SBC	REVISED -

CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

P2 1" x 6" x 1'-1"-

				YPE S-1 110-4019	
SHEET	6	OF	12	SHEETS	

TR RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
09A	A 22-03122-00-BR		CHAMPAIGN	20	14
			CONTRACT	NO. 916	32
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